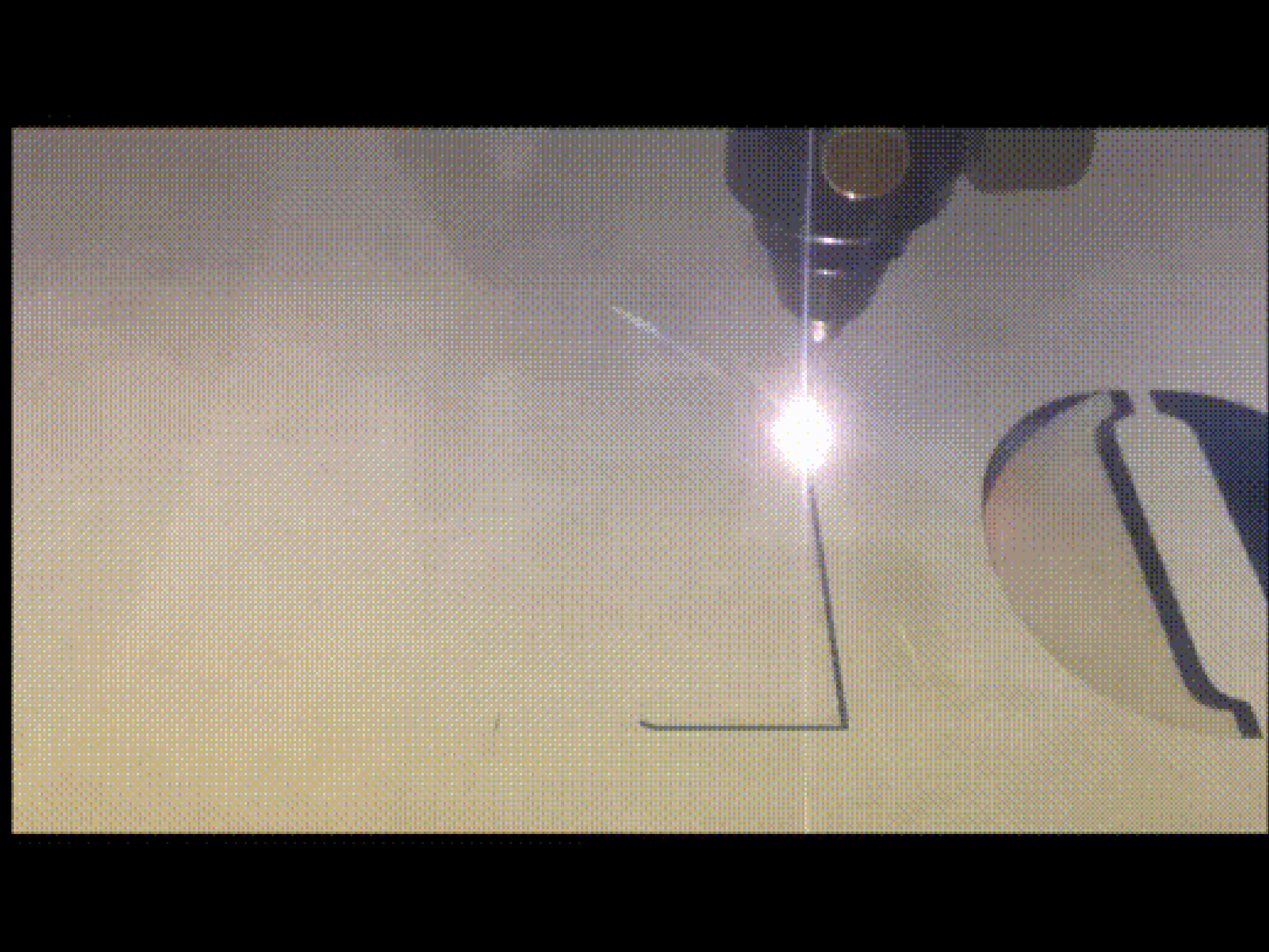
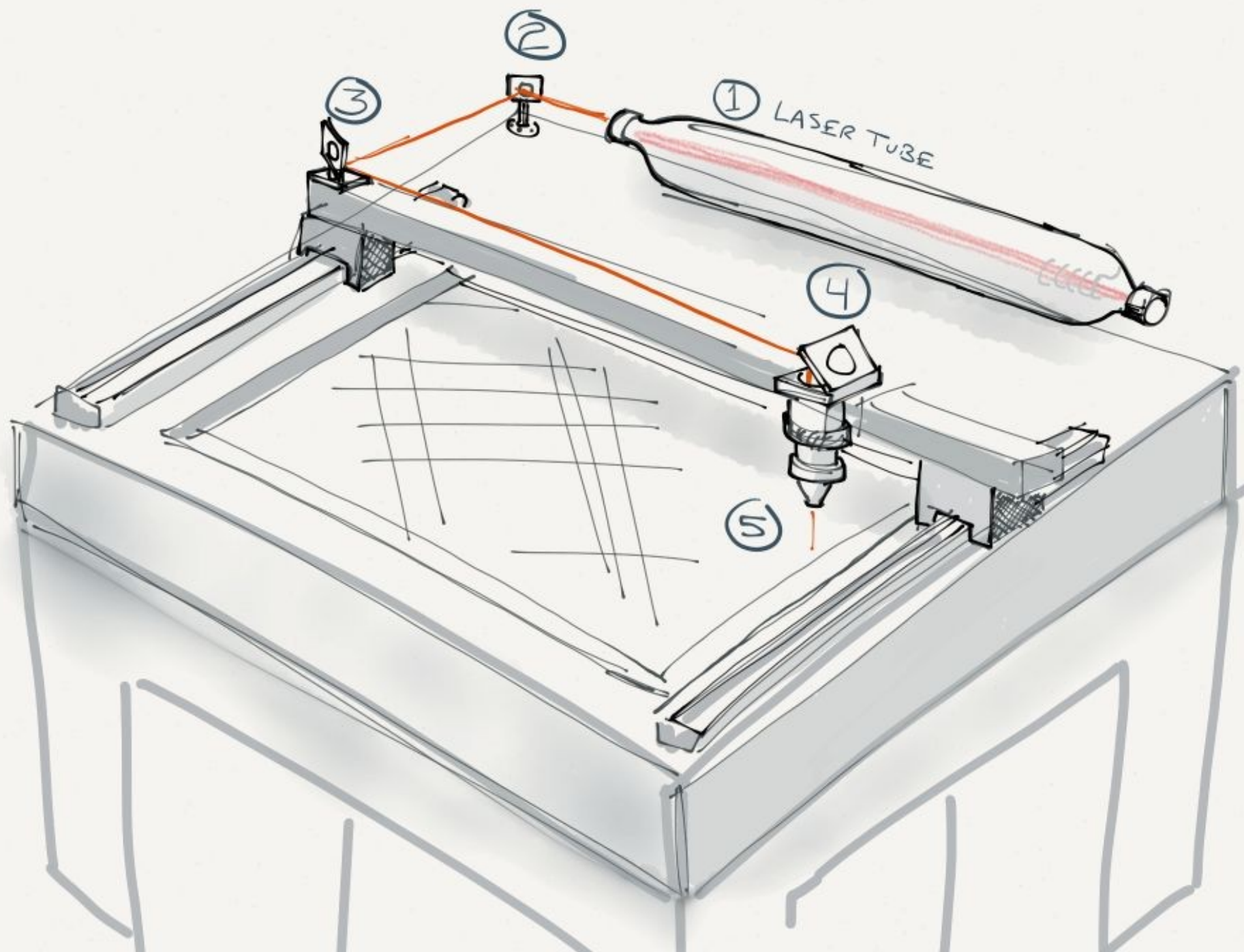
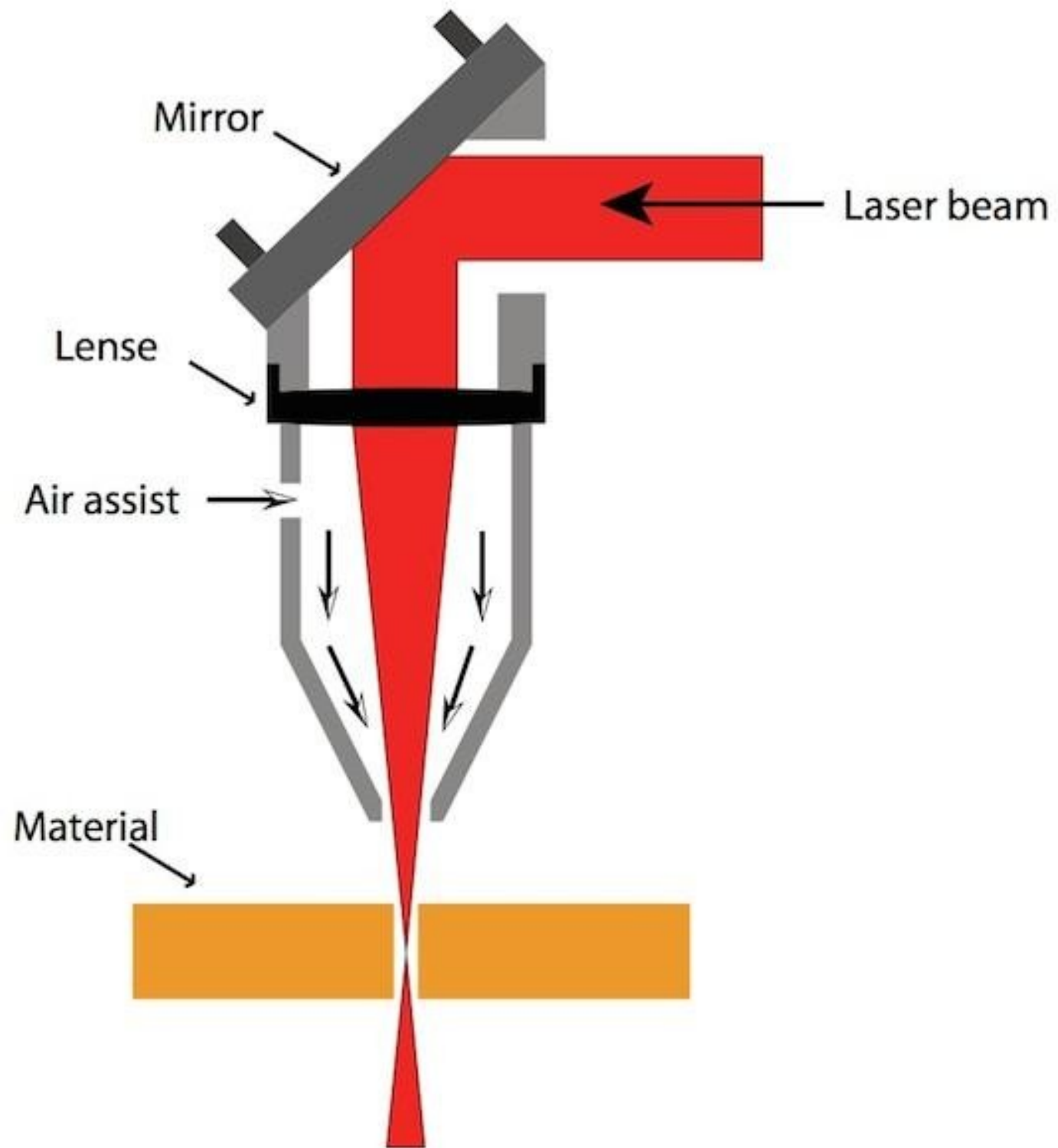


Laser Cutter Training









lasercutting

YOU.
BOARD
\$1



WARNING 29
Max ammeter of the laser tube is 29 MA.
If exceed will effect laser tube working
lifetime and power badly ,so pls use current
as small as possible



 READY

 AIR

 E-STOP

 COOLANT

 DOOR



AUTO
MANUAL

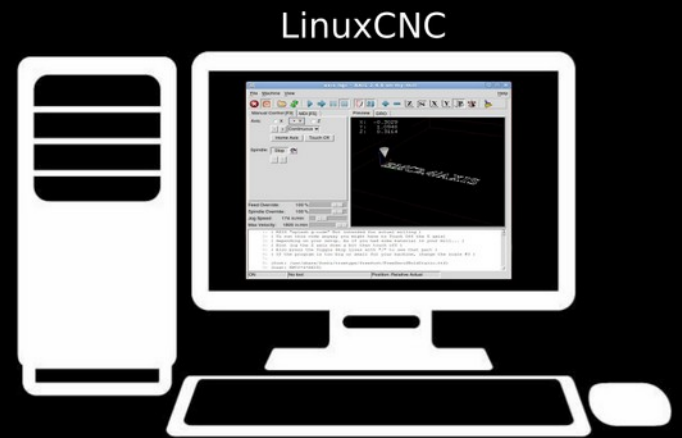
 FIRE

POWER 

CAUTION



moonraker.knoxxmakers.org



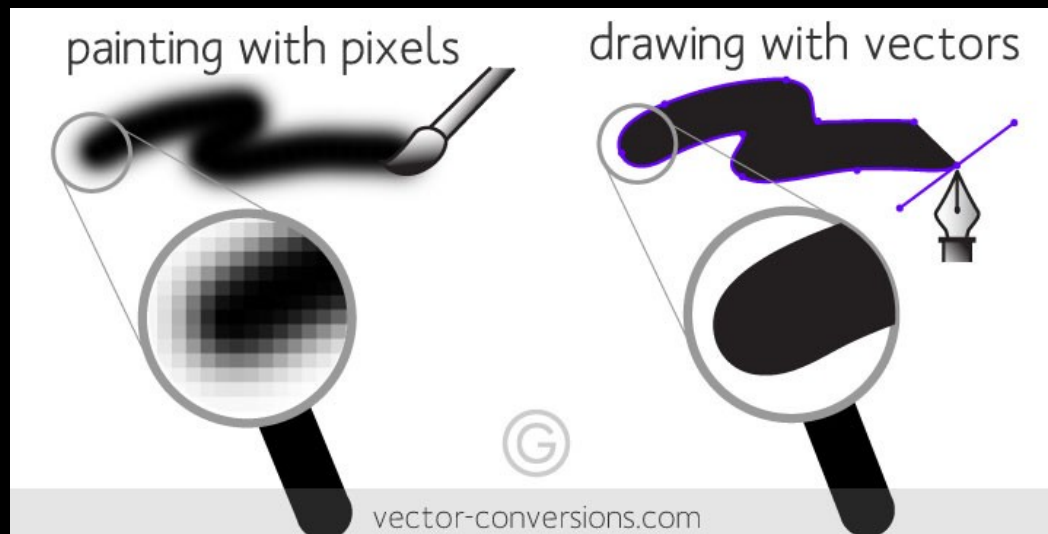
Raster vs. Vector

Raster

- Made of pixels arranged to form an image
- Does not scale
- .jpg, .png, .gif, .bmp
- Gimp, Photoshop

Vector

- Made of paths dictated by mathematical formulas
- Scales infinitely
- .svg, .ai, .cdr
- Inkscape, CorelDraw, Illustrator

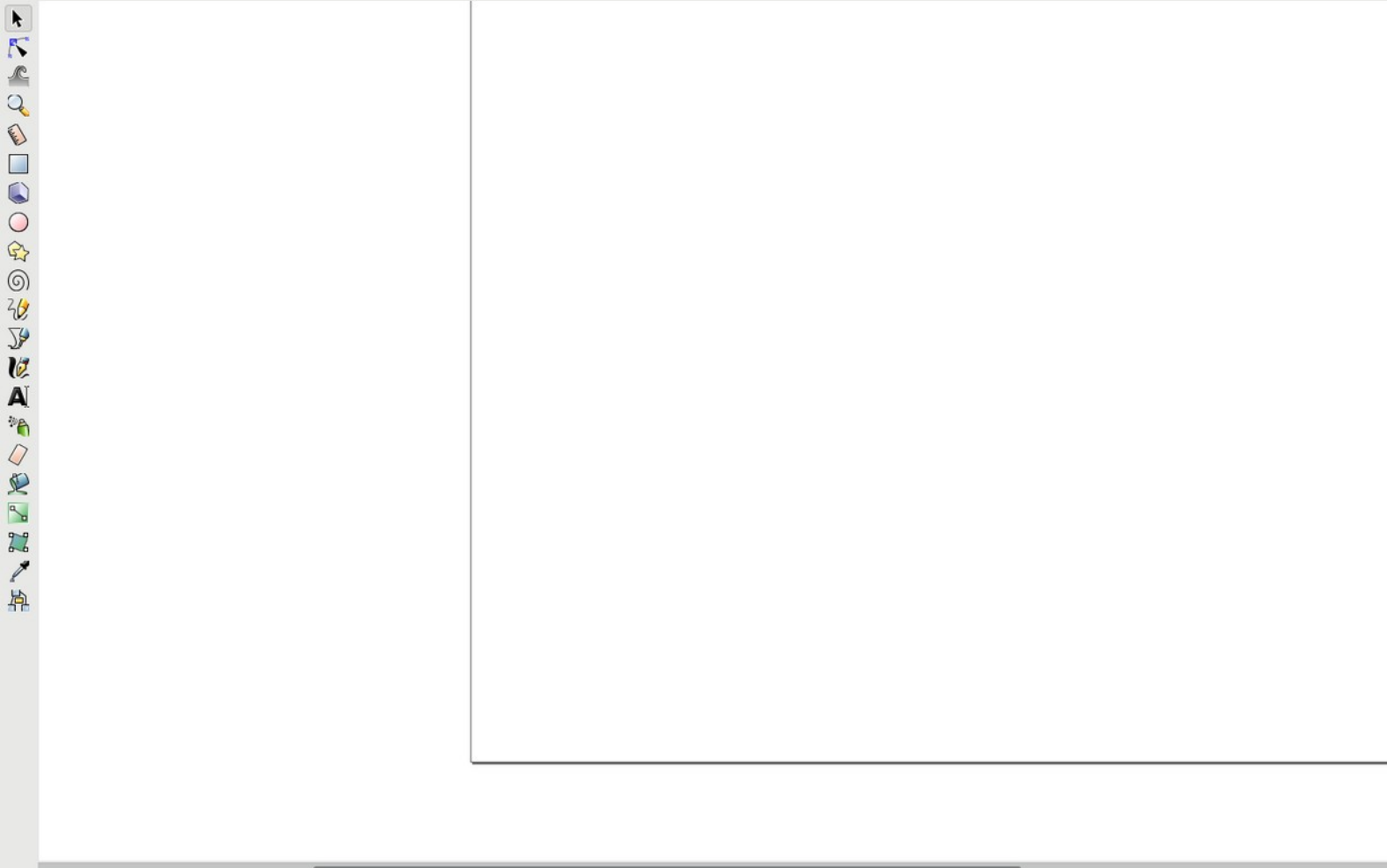




New document 1 - Inkscape

File Edit View Layer Object Path Text Filters Extensions Help

X: 0.000 Y: 0.000 W: 0.000 H: 0.000 mm



File: N/A Stroke: N/A O: 0 Layer 1 No objects selected. Click, Shift+click, Alt+scroll mouse on top of objects, or drag around objects to select.

X: 57.61 Y: 70.02 Z: 119%

Transform (Shift+Ctrl+M)

Move Scale Rotate Skew Matrix

Horizontal: 0.000 mm

Vertical: 0.000

☒ Relative move

☒ Apply to each object separately

Clear Apply

Align and Distribute (Shift+Ctrl+A)

Align

Relative to: Last selected

Treat selection as group: ☐

Distribute

Rearrange

Remove overlaps

H: 0.0 V: 0.0

Nodes

Relative to: Middle of selection

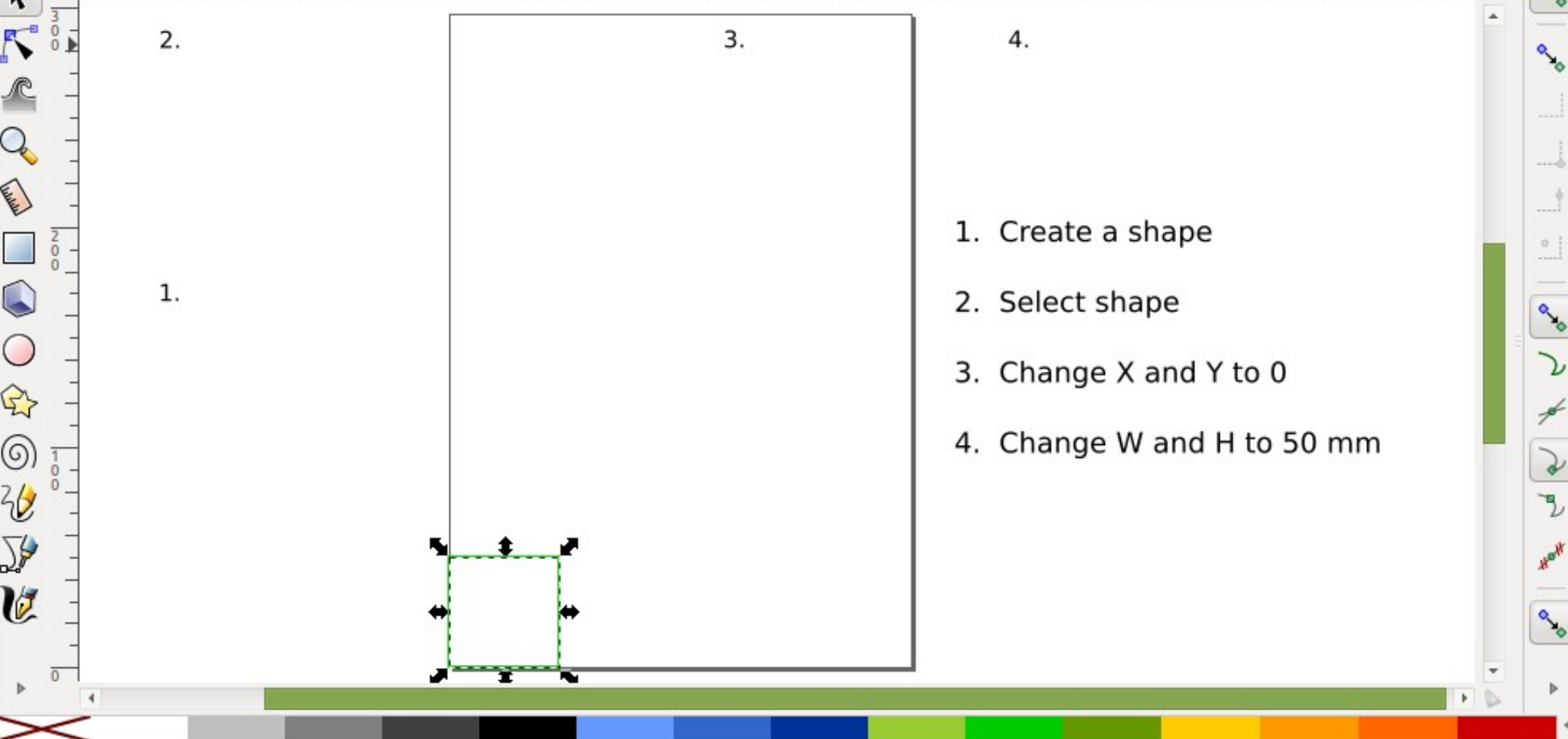
Fill and Stroke (Shift+Ctrl+F)

Fill Stroke paint Stroke style

x [color swatches] ? [lock] [unlock]



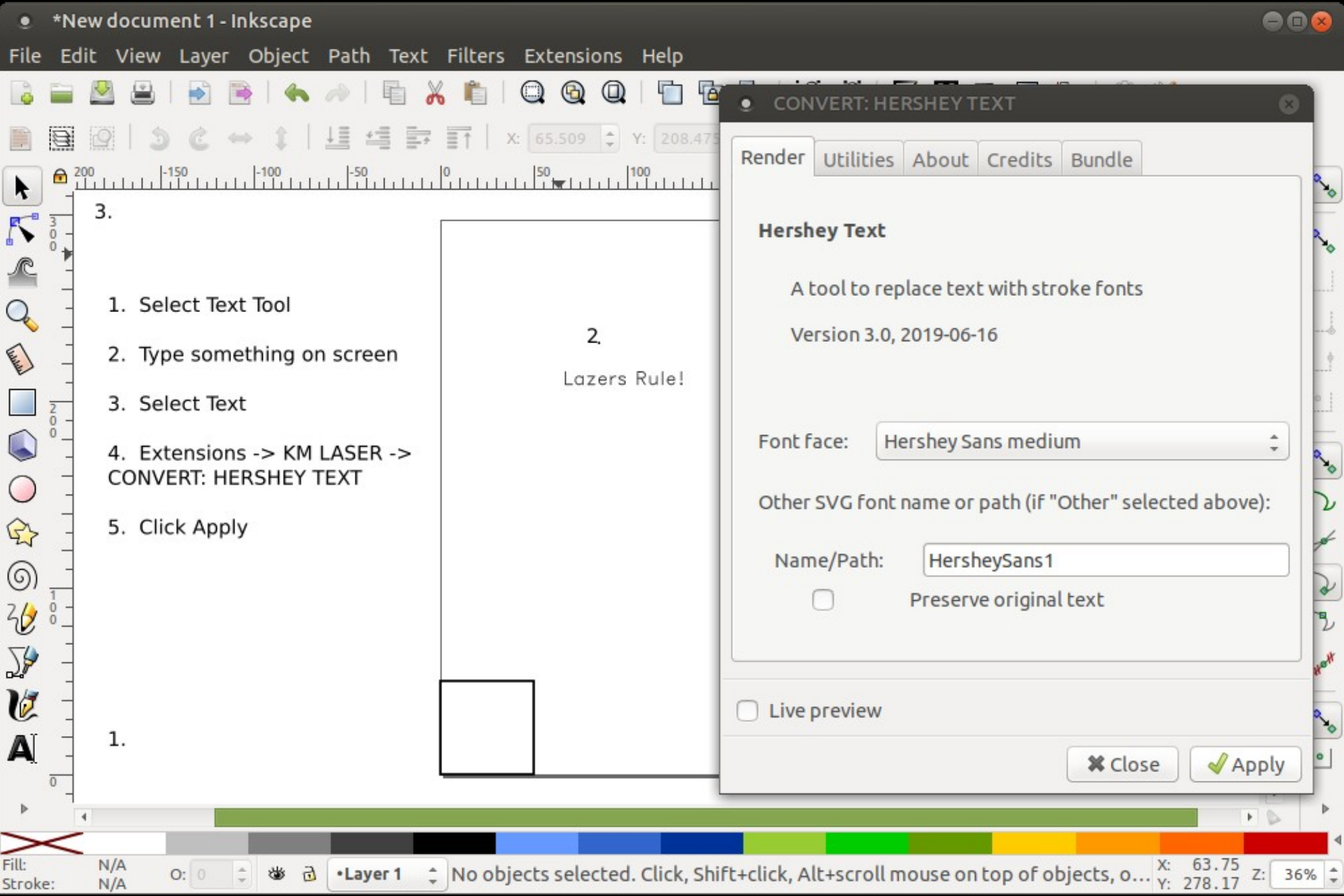
X: 0.000 Y: 0.000 W: 50.000 H: 50.000 mm



- 1. Create a shape
- 2. Select shape
- 3. Change X and Y to 0
- 4. Change W and H to 50 mm

2. Right click on Black and choose "Set Stroke"

2



3.

1. Select Text Tool
2. Type something on screen
3. Select Text
4. Extensions -> KM LASER -> CONVERT: HERSHEY TEXT
5. Click Apply

2.

Lazars Rule!

1.

CONVERT: HERSHEY TEXT

- Render
- Utilities
- About
- Credits
- Bundle

Hershey Text

A tool to replace text with stroke fonts

Version 3.0, 2019-06-16

Font face: Hershey Sans medium

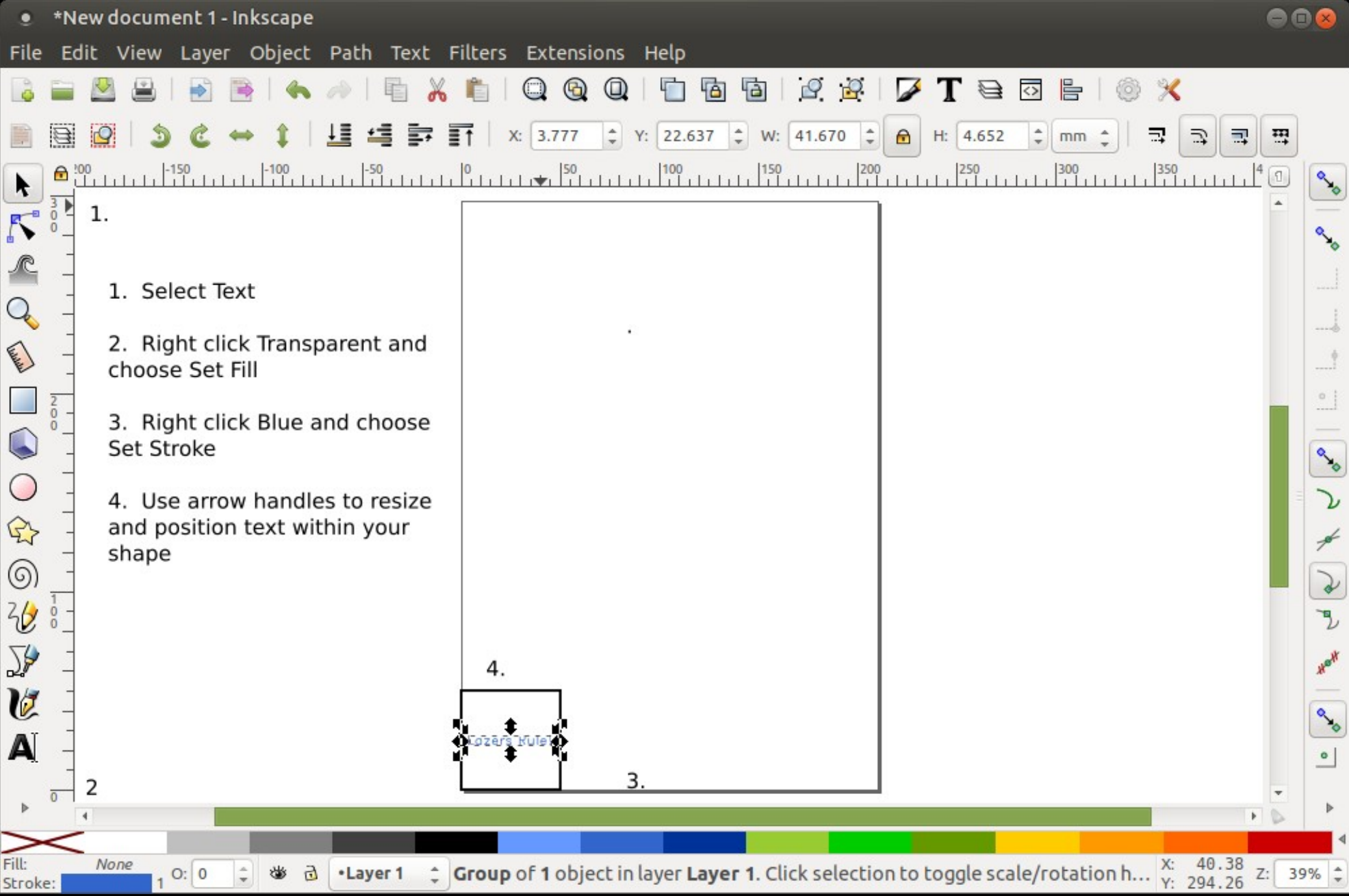
Other SVG font name or path (if "Other" selected above):

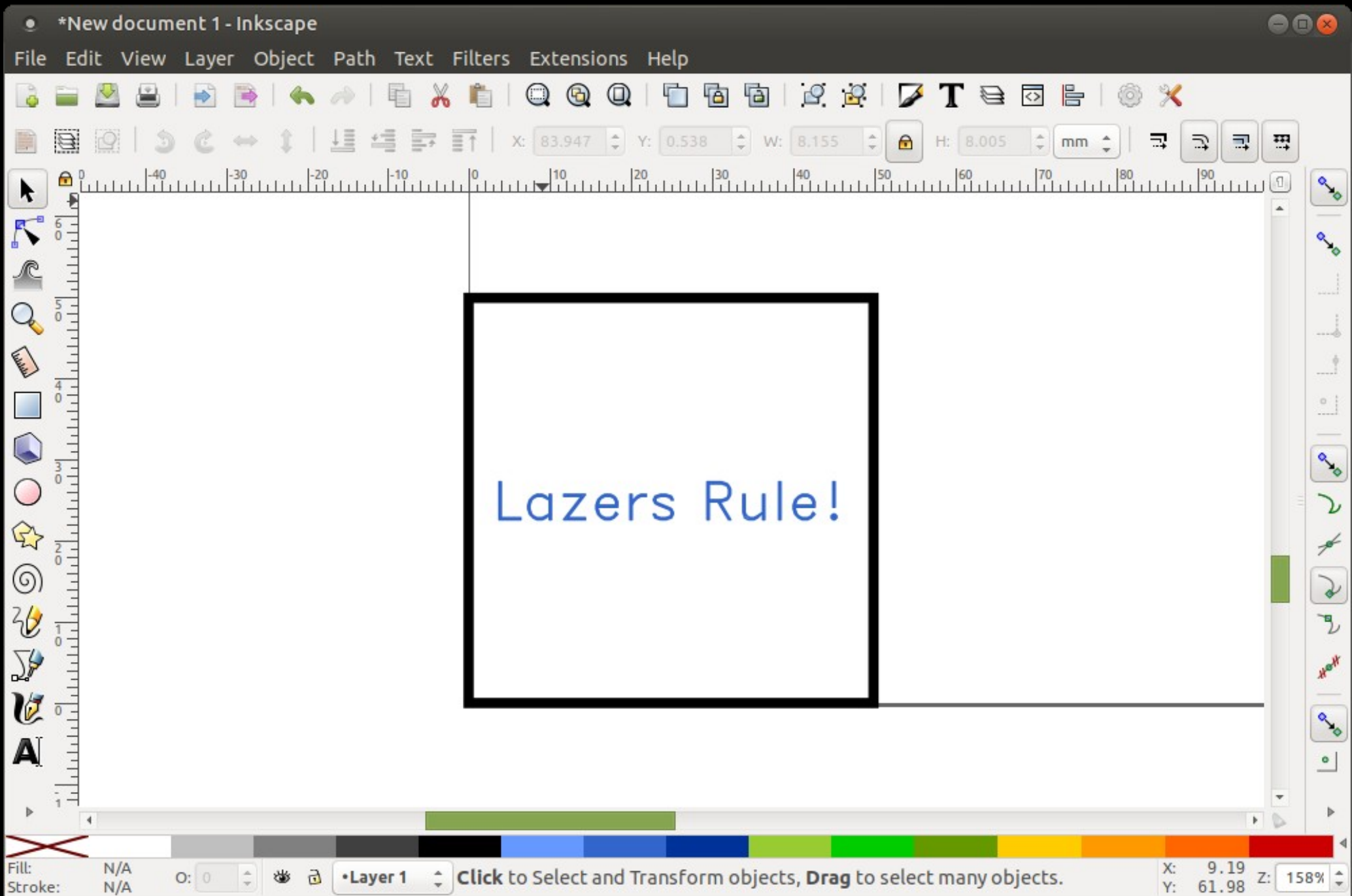
Name/Path: HersheySans1

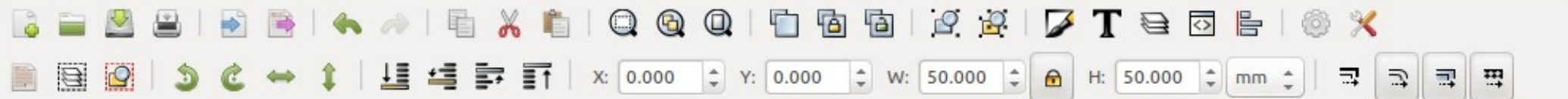
☐ Preserve original text

☐ Live preview

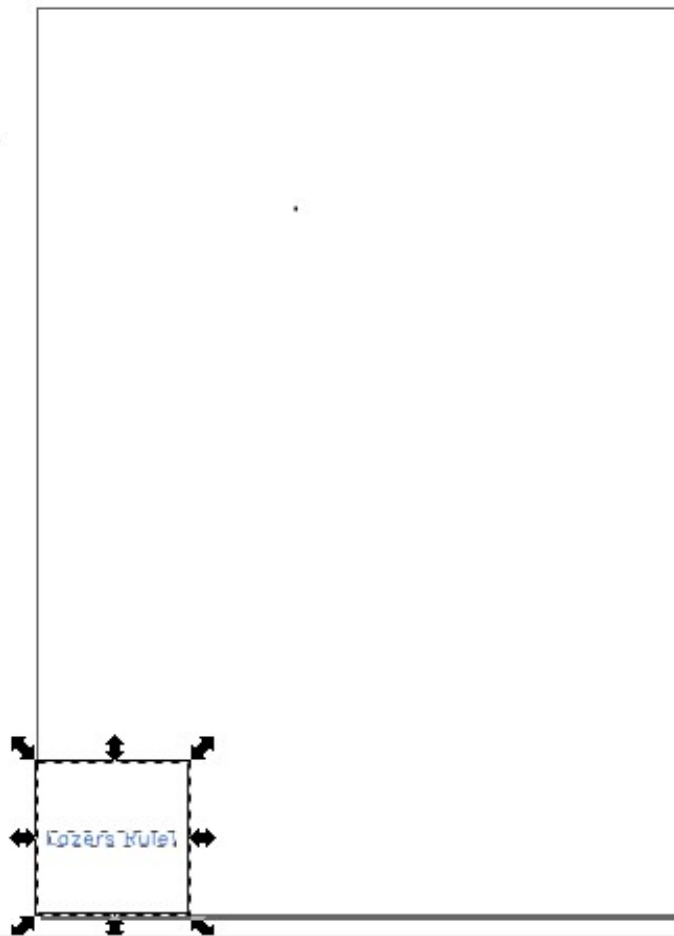
Close Apply







1. Type Ctrl-A to select all your objects
2. Path - > Object to Path
3. Save your work





- Open Firefox
- Navigate to moonraker.knoxmakers.org

Moonraker - Mozilla Firefox (Private Browsing)

Moonraker

moonraker.knoxbakers.org/#

MOONRAKER

Choose User 2 +

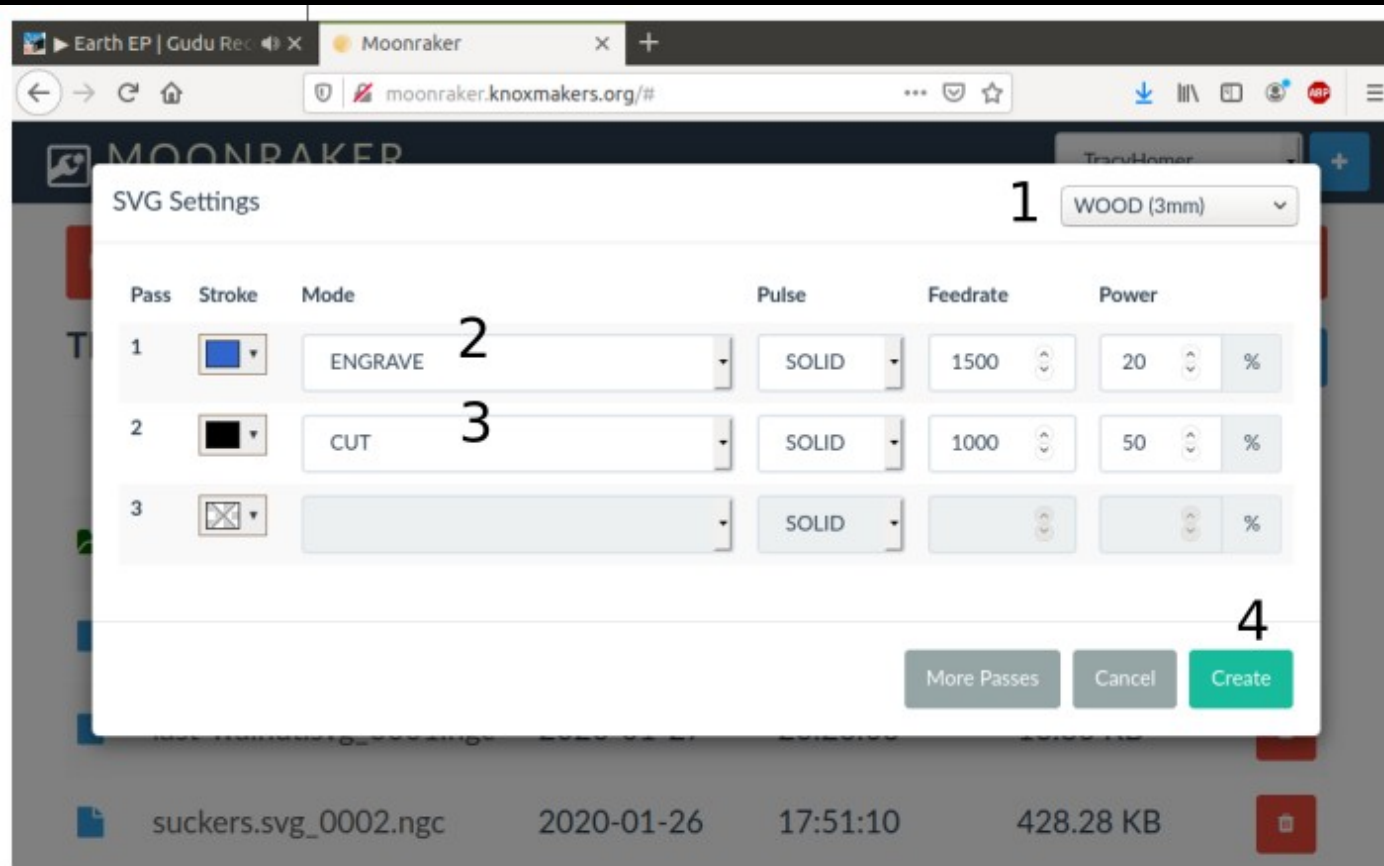
PLEASE CHOOSE A USER

New Folder Upload

3

FILENAME	DATE	TIME	SIZE
----------	------	------	------

1. Blue plus sign to add user
2. Drop down menu to choose your new self
3. Upload file



1. Choose WOOD(3mm) as material
2. First pass:
Stroke = Blue
Mode = Engrave
3. Second pass:
Stroke = Black
Mode = Cut
4. Click Create



MOONRAKER

TracyHomer



drawing-1.svg_0001.ngc

RENAME

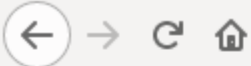
DELETE

DOWNLOAD

View

Gcode

```
1 %
2 (Header)
3 M64 P0 (M64 OFF / M62 ON)
4 G01 Z-0.000001 F10000
5 G21 (All units in mm)
6 G64 P.001 Q.001
7 (/Header)
8
9
10 (Pass: 1, Stroke: #3366cc)
11
12 (Pulse: 10000, Feedrate: 1500, Power: 0.2)
13
14 (Start cutting path id: path4701)
15 M68 E0 Q0.2
16 S10000 (PULSERATE) F1500 (FEEDRATE)
17 G00 X15.000000 Y27.000000
```



MOONRAKER

TracyHomer



drawing-1.svg_0001.ngc

RENAME

DELETE

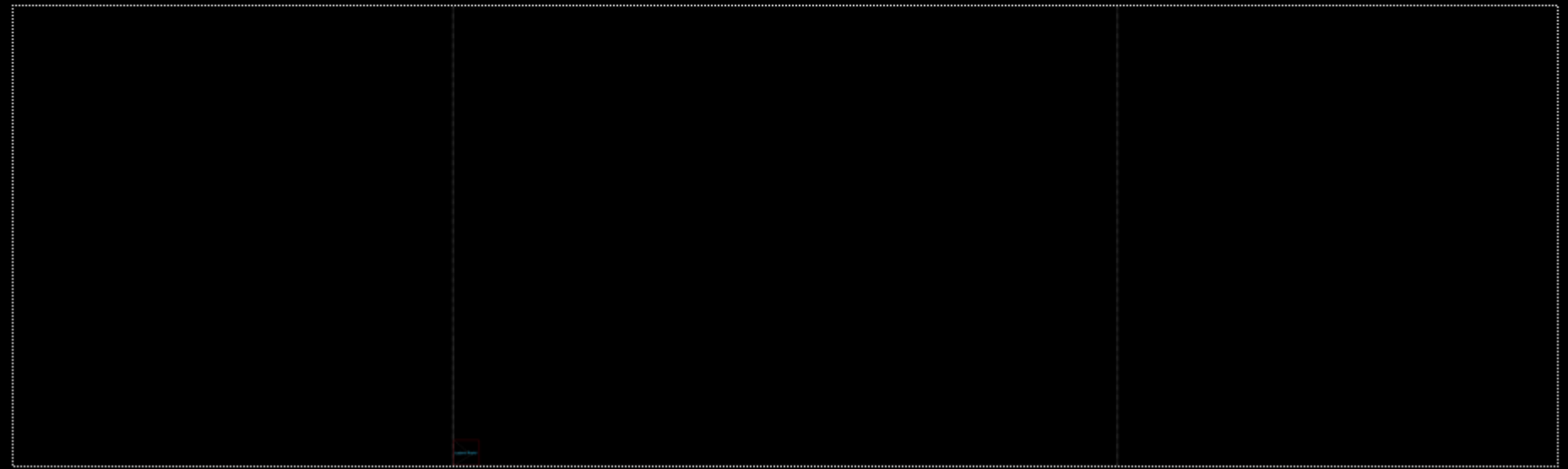
DOWNLOAD

View

Gcode

0.85 meters

~42s



File Machine View Help



Manual Control [F3] MDI [F5]

Axis: ☒ X ☐ Y ☐ Z

- + Continuous

Home All

Touch Off

Tool Touch Off

Spindle: Stop

- +

Preview DRO

X:	0.000	DTG X:	0.000
Y:	34.719	DTG Y:	0.000
Z:	15.375	DTG Z:	0.000
G54 X:	0.000	G92 X:	0.000
G54 Y:	0.000	G92 Y:	0.000
G54 Z:	-9.560	G92 Z:	0.000
G54 R:	0.000		
TLO X:	0.000		
TLO Y:	0.000		
TLO Z:	0.000		
Vel:	0.000		



Feed Override: 100%

Rapid Override: 100%

Spindle Override: 100%

Jog Speed: 1823 mm/min

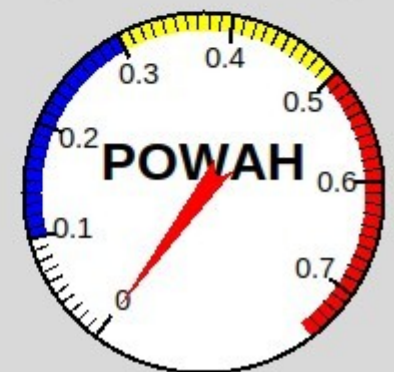
Max Velocity: 3200 mm/min

```
1: ( AXIS "splash g-code" Not intended for actual milling )
2: ( To run this code anyway you might have to Touch Off the Z axis)
3: ( depending on your setup. As if you had some material in your mill... )
4: ( Hint jog the Z axis down a bit then touch off )
5: ( Also press the Toggle Skip Lines with "/" to see that part )
6: ( If the program is too big or small for your machine, change the scale below )
7: ( LinuxCNC 19/1/2012 2:13:51 PM )
8: #<depth>=2.0
9: #<scale>=1.0
```

ESTOP

No tool

Position: Relative Actual



SET 0,0

BOUNDING BOX

PROBE TOUCH OFF

BED UP

BED DOWN

Elapsed Time

0h 0m 0s

Laser Cutter Training

